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EXAMINER

CHEUNG, WILLIAM K

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1713

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

MAILED

Application Number: 10/673,791
Filing Date: September 29, 2003
Appellant(s): SEIP ET AL.

APR 17 2006

GROUP 1700

Gary D. Mangels, Ph. D.
(Reg. No. 55,424)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 21, 2005 appealing from the Office
action mailed January 5, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5925703

Betso et al.

7-1999

GE Product trade literature on Ultranox 641 (1995).

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 5, 14, 15, 19, 20, 23, 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited "thiosynergist" in Claims 4, 5, 14, 15, 19, 20, 23, 24 are considered indefinite because the recited term is not defined in the specification. According to the prefix "thio" and its root word "synergy", the word means a substance that is capable of synergy when used with sulfur or sulfur-containing compounds. However, because Appellants' specification fails to specify which type of synergy (such as aging, color stability, or process stability) that the recited "thiosynergist" is pertained to, the recited "thiosynergist" really has no meaning. Without stating the type (or area) of improvement being referred to, one of ordinary skill in art would not know the metes and bounds of the claims or be able to appreciate the values of the claimed invention.

To support Appellants' argument, Appellants have submitted trade literature to equate the recited "thiosynergist" as "Lowinox DLTDP" which is used for the stabilization of polymers from aging. However, Appellants fail to recognize that the submitted literature fails to define adequately the recited "thiosynergist" because the recited term

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broadly embraces synergies that are not in the area of polymer stabilization from aging as well. Without stating the type or area of improvement from the synergy, one of ordinary skill in art would not know the metes and bounds of the claims or be able to appreciate the values of the claimed invention. The 112 rejection set forth by the examiner is proper.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6, 12-24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Betso et al. (US 5,925,703).

Betso et al. (abstract; col. 9, line 55-60) disclose filled polymer compositions that are easily molded and have utility in household articles. Further, Betso et al. (col. 9, line 12-37) clearly disclose polypropylene copolymers comprising 1.5-7% of ethylene as a thermoplastic component of the filled polymer composition. Therefore, the composition of Betso et al. clearly qualify the composition of Betso et al. to be a propylene/ethylene copolymer. Since the ethylene content of the copolymer of Betso et al. is below 15 percent, the composition of Betso et al. and the composition of the claimed household article are substantially identical. Since the polymerization of ethylene and propylene can only occur through the double bonds of the olefins, the examiner has no expectation that the structure of the copolymer of Betso et al. and the structure of the copolymer of the claimed household article to be different. Therefore, the examiner has a reasonable basis to believe that the claimed copolymers of the claimed household article and the copolymers of Betso et al. are the same.

Regarding the claimed "xylene solubles fraction having an intrinsic viscosity of at least 3 dL/g" and that the claimed "xylene soluble fraction has a molecular weight (Mw/1000) of at least about 350", because the resins of Betso et al. and the claimed resins are substantially identical in monomeric composition, the examiner believes that the properties of their soluble fraction in xylene should be very similar. Regarding the claimed "molecular weight (Mw/1000) of at least about 350", Appellants must recognize

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that the solubility a polymer is dependent on its molecular weight when the monomeric composition are substantially identical. Therefore, the examiner believes that the claimed "molecular weight (Mw/1000) of at least about 350" is inherently possessed in Betso et al.

Regarding the claimed "intrinsic viscosity", since the molecular weight of the xylene soluble fraction are the same, the examiner has a reasonable basis to believe that the claimed "intrinsic viscosity of the xylene solubles" is also inherently possessed in Betso et al.

Regarding the claimed additive package consisting essentially of a phenolic antioxidant, a phosphite, and an acid scavenger, Betso et al. (col. 6, line 1-29) disclose that the resin composition comprising a phenolic based antioxidant, and a phosphite. Therefore, it would not be difficult to one of ordinary skill in art to use the additive teachings in Betso et al. to obtain resin composition comprising a phenolic based antioxidant, and a phosphite. Regarding the claimed "acid scavenger", because it is well known in the art of olyolefin polymerization, as evident by Nosu et al. (US 6,221,472, col. 1, line 23-39)¹ or by Dotson et al. (US 6,794,433, col. 2, line 29-36)², that polyolefins generally comprise an acid neutralizer (such as calcium stearate) after its synthesis to prevent polymer degradation resulted from the residual catalyst. Therefore, the

¹ A reference that is not required for rejection, but would be useful to affirm the examiner's position that it is well-known in the art of olefin-polymerization art to recognize that an acid neutralizer such as calcium stearate is incorporated into the polymer after the polymer has been made.

² A reference that is not required for rejection, but would be useful to affirm the examiner's position that it is well-known in the art of olefin-polymerization art to recognize that an acid neutralizer such as calcium stearate is incorporated into the polymer after the polymer has been made.

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examiner has a reasonable basis to believe that the claimed acid scavenger (or calcium stearate) is inherently possessed in Betso et al.

Furthermore, as evident by the GE product literature (page 2), an additive package consisting essentially of phenolic antioxidant, a phosphite, and an acid scavenger is not considered inventive because it is a typical additive combination recommended by the manufacturers of additives. Appellants must recognize that the GE product literature (page 2) clearly shows that typical polyolefins are stabilized by the combination of U210 (a phenolic-type antioxidant), CaSt (a typical acid neutralizer), and U641 (a common phosphite-type secondary antioxidant).

Regarding the claimed "household articles being essentially free of sodium containing additives", since Betso et al. are silent on using a sodium containing additive in the disclosed resin composition, the examiner has a reasonable basis to believe that the claimed "essentially free of sodium containing additives" is inherently possessed in Betso et al.

Regarding the claimed "nucleated" feature of claim 1, the recitation implies that the claimed composition is either "semi-crystalline" or "crystalline" material. Because the composition as claimed and the composition disclosed in Betso et al. are substantially identical, the examiner has a reasonable basis to believe that the material of Betso et al. is also either "semi-crystalline" or "crystalline". Further, since a "semi-crystalline" or "crystalline" polymer can undergo "self-nucleation" processes without the need of a nucleating agent, or the polymer can undergoes "nucleation" process in the presence of any incorporated additives, such as the additives or fillers listed in Betso et al. (col. 6,

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line 1-15) which includes talc as claimed, the examiner believes that the claimed "nucleated" feature of claim 1 is inherently possessed in Betso et al.

Therefore, in view of the reasons set forth above, the examiner has a reasonable basis to believe that the claimed intrinsic viscosity of the xylene solubles, the the claimed molecular weight of the xylene solubles, the claimed "nucleated" feature of the propylene copolymer, and the claimed crystallinity are inherently possessed in Betso et al. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to appellants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977); In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Regarding Appellants' arguments filed in the Appeal Brief that Table IX of appellants' specification disclose propylene/ethylene impact copolymers having an ethylene content in the range of up to 15 percent do not necessarily have a intrinsic viscosity and molecular weight recited in claims 1-6 and 21-24. However, Appellants fail to recognize that Table IX only show that the claimed copolymer resin can have a broader range of intrinsic viscosity and molecular weight properties than the claimed range. Nevertheless, Table IX does not indicate that the claimed intrinsic viscosity and molecular weight of the xylene-soluble fraction can not be inherently possessed in Betso et al.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5, 15, 19, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Betso et al. (US 5,925,703) in view of GE product trade literature on Ultranox 641.

Betso et al. (abstract; col. 9, line 55-60) disclose filled polymer compositions that are easily molded and have utility in household articles. Further, Betso et al. (col. 9, line 12-37) clearly disclose polypropylene copolymers comprising 1,5-7% of ethylene as a thermoplastic component of the filled polymer composition. Betso et al. (col. 6, line 1-29) disclose that the filled composition comprising talc as a filler, and phenolic based antioxidants, phosphites. Since Betso et al. are silent on using a sodium containing additives in the disclosed composition, the examiner has a reasonable basis to believe

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that the claimed "essentially free of sodium containing additives" is inherently possessed in Betso et al.

The difference between the composition of Betso et al. and the articles as claimed in claims 5, 15, 19, 24 is that Betso et al. are silent on the specific amount of each of the additives being claimed.

However, in view that the claimed specific amount of additives in the claims are within the recommended amount suggested by the GE Product literature (page 2), motivated by the expectation of success of preparing an article with improved color, thermal, stability, it would have been obvious to one of ordinary skill in art to use the amount as recommended by the additive supplier to obtain the invention of claims 5, 15, 19, 24. To overcome the instant 103 rejection, applicants should submit comparative data to show the criticality of the claimed composition of the articles.

(10) Response to Argument

Regarding Appellants' argument that the submitted trade literature shows that the recited "thiosynergist" is synonymously "Lowinox DLTDP", an additive for the stabilization of polymers from aging, Appellants fail to recognize that the submitted literature fails to define adequately what the recited "thiosynergist" is. This is because the recited term broadly embraces synergies that are not in the area of polymer stabilization from aging as well. Without stating the type or area of improvement from the synergy, one of ordinary skill in art would not know the metes and bounds of the

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claims or be able to appreciate the values of the claimed invention. The 112 rejection set forth by the examiner is proper.

Regarding Appellants argument that the examiner fail to provide proper rationale to set forth the inherency made in the office action, the examiner disagrees because the examiner clearly indicated that the basis for the inherency is based on that the composition disclosed in the prior art is substantially identical to the composition as claimed. One of ordinary skill in art would understand that a substantially identical composition should inherent identical features.

According to MPEP 211.03, Appellants must recognize that "[T]he discovery of a previously unappreciated property of a prior art composition, or of a scientific explanation for the prior art's functioning, does not render the old composition patentably new to the discoverer." *Atlas Powder Co. v. Ireco Inc.*, 190 F.3d 1342, 1347, 51 USPQ2d 1943, 1947 (Fed. Cir. 1999). Thus the claiming of a new use, new function or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

Further, according to MPEP 2112, it is clearly stated that "Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103, expressed as a 102/103 rejection. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." *In re*

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Best, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977). This same rationale should also apply to product, apparatus, and process claims claimed in terms of function, property or characteristic. Therefore, a 35 U.S.C. 102/103 rejection is appropriate for these types of claims as well as for composition claims.

For the above reasons, it is believed that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,



William K. Cheung

**WILLIAM K. CHEUNG
PRIMARY EXAMINER**

April 13, 2006

Conferees

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